

Task History

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Detailed display from Answer set 6 of Highly Potent, Orally Available Anti-inflammatory Broad-Spectrum Chemokine Inhibitors

Highly Potent, Orally Available Anti-inflammatory Broad-Spectrum Chemokine Inhibitors

By: Fox, David J.; Reckless, Jill; Lingard, Hannah; Warren, Stuart; Grainger, David J.

A series of 3-acylamino-caprolactams are inhibitors of chemokine-induced chemotaxis. Branching of the side chain α -carbon provides highly potent inhibitors of a range of CC and CXC chemokines. The most potent compd. has an ED50 of 40 pM. Selected compds. were tested in an in vivo inflammatory assay, and the best compd. reduces TNF- α levels with an ED50 of 0.1 μ g/kg when administered by either s.c. injection or oral delivery.

Indexing

Pharmacology (Section 1-3)

Concepts

Anti-inflammatory agents
Cell migration
Chemotaxis
Human
Inflammation
Neutrophil
Structure-activity relationship
oral antiinflammatory broad-spectrum chemokine inhibitors

CC chemokines
CXC chemokines
Chemokines
Interleukin 8
Macrophage inflammatory protein 1 α
Monocyte chemoattractant protein-1
RANTES(chemokine)
Tumor necrosis factors
oral antiinflammatory broad-spectrum chemokine inhibitors
Biological study, unclassified; Biological study

Substances

853905-44-9P
oral antiinflammatory broad-spectrum chemokine inhibitors
Drug mechanism of action; Pharmacological activity; Reactant; Synthetic preparation; Therapeutic use;
Biological study; Preparation; Uses; Reactant or reagent

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 876063-99-9P
 876064-01-6P
 876064-02-7P
 876064-03-8P
 1160115-32-1P
 1160115-34-3P

oral antiinflammatory broad-spectrum chemokine inhibitors

Drug mechanism of action; Pharmacological activity; Synthetic preparation; Therapeutic use; Biological study; Preparation; Uses

108-18-9 Diisopropylamine
 112-31-2 Decanal
 547-63-7 Methyl isobutyrate
 671-42-1
 870-63-3
 924-50-5 Methyl 3,3-dimethylacrylate
 2094-72-6 1-Adamantanecarbonyl chloride
 2719-27-9 Cyclohexanecarbonyl chloride
 2890-61-1 1-Methylcyclohexanecarbonyl chloride
 3282-30-2 2,2-Dimethylpropionyl chloride
 4301-04-6
 5856-77-9 2,2-Dimethylbutyryl chloride
 15721-22-9 2,2-Dimethylpentanoyl chloride
 19835-38-2
 21568-87-6
 26081-07-2
 28957-33-7
 36278-22-5 1-Cyclohexenecarbonyl chloride
 39482-46-7 2,2-Dimethyl-4-pentenoyl chloride
 39691-62-8 Nonylmagnesium bromide
 50321-59-0
 60631-34-7 2,2-Dimethyldodecanoyl chloride
 67589-90-6
 73152-73-5

oral antiinflammatory broad-spectrum chemokine inhibitors

Reactant; Reactant or reagent

2198-82-5P 2,2,5-Trimethyl-4-hexenoic acid
 53663-29-9P (E)-2-Methyldodec-2-enoic acid
 66478-19-1P
 102944-03-6P 3,3-Dimethyldodecanoic acid
 476690-74-3P (E)-Ethyl 2-methyldodec-2-enoate
 853905-71-2P
 1017249-22-7P
 1017249-74-9P

oral antiinflammatory broad-spectrum chemokine inhibitors

Reactant; Synthetic preparation; Preparation; Reactant or reagent

Supplementary Terms

oral antiinflammatory chemokine inhibitor structure

Citations

- 1a) Gerard, C; Nat Immunol 2001, 2, 108
- 1b) Horuk, R; Cytokine Growth Factor Rev 2001, 12, 313
- 1c) Rollins, B; Blood 1997, 90, 909
- 1d) Luster, A; N Engl J Med 1998, 338, 436
- 1e) Thelen, M; Nat Immunol 2001, 2, 129
- 2) Viola, A; Annu Rev Pharmacol Toxicol 2008, 48, 171
- 3a) Ribeiro, S; Pharmacol Ther 2005, 107, 44
- 3b) Carter, P; Curr Opin Chem Biol 2002, 6, 510
- 3c) Allen, S; Annu Rev Immunol 2007, 25, 787
- 4a) Vaidehi, N; J Biol Chem 2006, 281, 27613
- 4b) Pasternak, A; Bioorg Med Chem Lett 2008, 18, 1374
- 4c) Santella, L; Bioorg Med Chem Lett 2008, 18, 576
- 4d) Thoma, G; Bioorg Med Chem Lett 2008, 18, 2000
- 5a) Vandercappellen, J; Cancer Lett 2008, 267, 226
- 5b) Biju, P; Bioorg Med Chem Lett 2008, 18, 228
- 6a) Reckless, J; Biochem J 1999, 340, 803
- 6b) Reckless, J; Immunology 2001, 103, 244
- 7a) Fox, D; J Med Chem 2002, 45, 360
- 7b) Fox, D; J Med Chem 2005, 48, 867
- 8a) Grainger, D; Biochem Pharmacol 2003, 65, 1027
- 8b) Naidu, B; Ann Thorac Surg 2003, 75, 1118
- 8c) Wilbert, S; Anal Biochem 2000, 278, 14
- 9) Schroff, R; Mini-Rev Med Chem 2005, 5, 849
- 10) Frow, E; Med Res Rev 2004, 24, 276
- 1) Boyle, W; J Am Chem Soc 1979, 44, 4841
- 2) Rezier, E; J Med Chem 1997, 40, 3508
- 3) Reckless, J; Biochem J 1999, 340, 803
- 4) Fox, D; J Med Chem 2002, 45, 360
- 5) Fox, D; J Med Chem 2005, 48, 867
- 6) Frow, E; Med Res Rev 2004, 24, 267

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